Business Models for Internet-Based E-Procurement Systems and B2B Electronic Markets: An Exploratory Assessment

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Abstract

Information technology (IT) has long been applied to support the exchange of goods, services and information between organizations. It is with the advent of Internet-based eprocurement systems and business-to-business (B2B) electronic markets that the real opportunities for online transactions have opened up across space and over time. In this paper, we draw on IS and economics theory to investigate the motivation for the various online business models, and the adoption requirements of purchasing firms, through the examination of a set of mini-cases. Our exploratory study finds that private aggregating and negotiating mechanisms are being adopted for large quantity business supply purchases, while public market mechanisms are more often adopted when firms face uncertain and high variance demand. Moreover, market facilitation, expertise sharing and collaboration are gradually attracting more attention, and call for future investigation.

Keywords: B2B, buyer-supplier relationships, e-business, electronic markets, e-procurement, interorganizational information systems.

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1. Introduction

Interorganizational information systems (IOS) can be used to form electronic marketplaces in which buyers and sellers exchange information and make transactions [3]. Before the commercial application of the Internet and the World Wide Web, proprietary information systems such as electronic data interchange (EDI) systems were the major means by which firms exchanged business documents electronically. Although EDI systems continue to enable firms to achieve more efficient data and information management and to improve supply chain management, there are still a lot of companies that do not yet use EDI due to the relatively high costs of implementing and running such systems [26]. New alternatives exist, however. Internet-based e-procurement systems and business-to-business (B2B) electronic marketplaces are different from proprietary IOS that involve EDI. They are open systems that enable firms to reach and transact with suppliers and customers in virtual markets without investments in dedicated systems. Figure 1 displays the different IT-enabled procurement mechanisms.

Figure 1. IT-Enabled procurement mechanisms

According to a recent report, the value of goods and services sold via B2B electronic markets will reach $2.7 trillion by the year 2004, representing some 27% of the overall B2B market and almost 3% of global sales transactions [14]. This growth is slated to occur in the context of a global market for B2B transactions worth $953 billion, growing to about $7.29 trillion by 2004.